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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LE, TOAN M

ART UNIT

PAPER NUMBER

2863

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent-ch@btlaw.com

Office Action Summary	Application No. 10/639,925	Applicant(s) PREIKSZAS ET AL.	
	Examiner TOAN M. LE	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-70 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 65-70 is/are allowed.
- 6) ☒ Claim(s) 37-48, 53, 54 and 56-59 is/are rejected.
- 7) ☒ Claim(s) 49-52, 55 and 60-64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

Claim 55 is objected to because of the following informalities:

Claim 55, line 24, "the combination of accelerating voltage aperture and identity" should read -the combination of accelerating voltage and aperture identity-.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 37-48, 53-54, and 56-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinkawa (US Patent No. 5,831,265).

Referring to claim 37, Shinkawa discloses an instrument having:

- a) a user controllable operating parameter having a number of possible user controllable parameter values (col. 6, lines 6-12);
- b) a further operating parameter which is at least partially dependent on the user controllable parameter and which has any of a number of possible further parameter values, each corresponding to a respective one of the user controllable parameter values (col. 6, lines 12-17);

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c) a memory 20 (Figure 4) for storing the possible further parameter values (col. 6, lines 20-24 and lines 56-58);

d) a selector 17 (Figure 4: "Coarse Adjustment") for selecting one of the further stored parameter values for the further operating parameter in response to the selection by the user of the associated user controllable parameter value and for controlling the instrument accordingly (col. 6, lines 12-17 and lines 27-31);

e) whereby, if the selected user controllable parameter value is one for which there is no associated further parameter value stored in the memory, the instrument is operable to interpolate between further parameter values, stored in the memory, which correspond to user controllable parameter values in closest proximity to the selected user controllable parameter value to obtain a further parameter value corresponding to the selected user controllable parameter value (col. 6, lines 45-56);

f) a tuner 23 (Figure 4: "Fine Adjustment Entry") for enabling a user to adjust the selected further parameter value, after a given user controllable parameter value has been selected, to obtain an adjusted further parameter value (col. 6, lines 58-61);

g) updating apparatus 22 (Figure 4: "Adder Circuit") for updating the memory so that the adjusted further parameter value is selected if the given user controllable parameter value is again selected for the user controllable operating parameter (col. 6, lines 62-67).

As to claim 38, Shinkawa discloses an instrument in which the updating apparatus is such that if the selected, interpolated further parameter value is adjusted, the updating apparatus is operable to update each of the two values in the memory so that the interpolation would have

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yielded the adjusted value in response to the selection of the same intermediate value of user controllable parameter had this occurred after the updating (col. 6, lines 51-61).

Referring to claim 39, Shinkawa discloses an instrument in which if the selected, interpolated further parameter is updated, only the two values in the memory are updated (col. 6, lines 51-61).

As to claim 40, Shinkawa discloses an instrument in which the stored values of the further parameter are arranged in the memory in an index in which the stored values are arranged in an order corresponding to progressively changing values of the associated user controllable parameter (col. 6, lines 51-61).

Referring to claim 41, Shinkawa discloses an instrument in which the further operating parameter is one of a plurality of such parameters, values for all of which are stored in the memory (col. 6, lines 51-61).

As to claim 42, Shinkawa discloses an instrument in which the instrument is a charged particle beam instrument having a beam generator for generating charged particles and for subjecting the particles to an accelerating voltage to create a beam, and an alignment element for controlling the alignment of the beam, wherein the accelerating voltage constitutes the user controllable parameter and the further operating parameter comprises a setting for the alignment element (col. 6, lines 6-12).

Referring to claim 43, Shinkawa discloses an instrument in which the alignment element is a magnetic coil, and the associated further parameter is the value or relative value of current passed through the coil (col. 6, lines 6-24).

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As to claim 44, Shinkawa discloses an instrument in which the alignment element is an electrode the value of the associated parameter being the voltage applied to the electrode (col. 3, lines 12-20).

Referring to claim 45, Shinkawa discloses an instrument in which the instrument has a plurality of different alignment coils, the further operating parameter is one of a plurality of such parameters, values for all of which are stored in the memory, and the further operating parameters comprise the currents in the coils or the relative current magnitudes in the coils (col. 6, lines 6-26).

As to claim 46, Shinkawa discloses an instrument in which the charged particle beam instrument is a scanning electron microscope, the beam generator comprising an electron gun having a cathode and an extraction electrode to which the accelerating voltage is applied, the alignment coils acting as gun alignment coils for controlling the alignment of the beam onto an electron optical axis of the microscope (col. 3, lines 12-31).

Referring to claim 47, Shinkawa discloses an instrument in which the electron microscope includes a plurality of apertures in the path of a beam to be generated by the beam generator, wherein the alignment coils are operable to direct the beam through any selected one of the apertures (col. 4, lines 18-22; Figures 1 and 4).

As to claim 48, Shinkawa discloses an instrument in which the magnitude of the accelerating voltage comprises one of a plurality of user controllable parameters, another such parameter being constituted by the identity of the aperture through which the beam is to pass (col. 4, lines 18-22; Figures 1 and 4).

Referring to claim 53, Shinkawa discloses an instrument wherein the instrument is a scanning charged particle beam instrument having a gun for generating the beam of charged particles, a plurality of apertures through any selected one of which the beam may pass, an accelerating electrode to which a voltage is applied to accelerate the particles away from the gun, and at least one alignment element for directing the beam through the selected aperture, wherein the further parameter values which are stored in a memory comprise values for the settings of the alignment element dependent on the voltage applied to the accelerating electrode and the choice of aperture (col. 3, lines 12-31; col. 4, lines 18-22; col. 6, lines 6-34).

As to claim 54, Shinkawa discloses an instrument having:

- a) a user controllable operating parameter having a number of possible user controllable parameter values (col. 6, lines 6-12);
- b) a further operating parameter which is at least partially dependent on the user controllable parameter and which has any of a number of possible further parameter values, each corresponding to a respective one of the user controllable parameter values;
- c) a memory 20 (Figure 4) for storing the possible further parameter values (col. 6, lines 20-24 and lines 56-58);
- d) a selector 17 (Figure 4: "Coarse Adjustment") for selecting one of the further stored parameter values for the further operating parameter in response to the selection by the user of the associated user controllable parameter value and for controlling the instrument accordingly (col. 6, lines 12-17 and lines 27-31);

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e) wherein the stored further parameter values are arranged in the memory in an index in which the stored values are arranged in an order corresponding to progressively changing values of the associated user controllable operating parameter (col. 6, lines 51-61);

f) a tuner 23 (Figure 4: “Fine Adjustment Entry”) for enabling a user to adjust the selected further parameter value, after a given user controllable parameter value has been selected, to obtain an adjusted further parameter value (col. 6, lines 58-61);

g) updating apparatus 22 (Figure 4: “Adder Circuit”) for updating the memory so that the adjusted further parameter value is selected if the given user controllable parameter value is again selected for the user controllable operating parameter (col. 6, lines 62-67).

Referring to claim 56, Shinkawa discloses an instrument in which the instrument is a charged particle beam instrument having a beam generator for generating charged particles and for subjecting the particle to an accelerating voltage to create a beam, and an alignment element for controlling the alignment of the beam, wherein the accelerating voltage constitutes the user controllable parameter and the further operating parameter comprises a setting for the alignment element (col. 6, lines 6-12).

As to claim 57, Shinkawa discloses an instrument in which the charged particle beam instrument is a scanning electron microscope, the beam generator, comprising an electron gun having a cathode and an extraction electrode to which the accelerating voltage is applied, the alignment coils acting as gun alignment coils for controlling the alignment of the beam onto an electron optical axis of the microscope (col. 3, lines 12-31).

Referring to claim 58, Shinkawa discloses an instrument in which the electron microscope includes a plurality of apertures in the path of a beam to be generated by the beam

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generator, wherein the alignment coils are operable to direct the beam through any selected one of the apertures (col. 4, lines 18-22; Figures 1 and 4).

As to claim 59, Shinkawa discloses an instrument in which the magnitude of the accelerating voltage comprises one of a plurality of user controllable parameters, another such parameter being constituted by the identity of the aperture through which the beam is to pass (col. 4, lines 18-22; Figures 1 and 4).

Allowable Subject Matter

Claims 49-52 and 60-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance of claims 49 and 60 is the inclusion of the stored values are arranged in a list in which each value is identified by a respective index code representative of the combination of accelerating voltage and aperture identity for which the stored value of alignment coil current or relative current at that entry applies.

The reason for allowance of claims 50 and 61 is the inclusion of the list is part of a look-up table in which for each index code there are also stored values for additional further parameters applicable to the respective combination of aperture identity and accelerating voltage.

The reason for allowance of claims 51 and 62 is they depend upon allowable claims 49 and 60, respectively.

The reason for allowance of claim 52 is the inclusion of the index code being representative of the state of at least one of the operating modes.

Allowable Subject Matter

Claim 55 is objected as above, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance of claim 55 is the inclusion of the stored further parameter values are arranged in a list in which each further parameter value is identified by a respective index code representative of the combination of accelerating voltage and aperture identity to which the further parameter value applies.

Claims 63-64 are objected to as being dependent upon objected base claim 55, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance of claim 63 is the inclusion of the list is part of a look-up table in which for each index code there are also stored values for additional further parameters applicable to the respective combination of aperture identity and accelerating voltage.

The reason for allowance of claim 64 is it depends upon allowable claim 63.

Allowable Subject Matter

Claims 65-70 are allowed.

The reason for allowance of claim 65 is the inclusion of the microscope has a number of operating modes, each of which also constitutes a user controllable operating parameter, and index code in the memory also being representative of the state of at least one of the operating modes.

The reason for allowance of claims 66-70 is they depend upon allowable claim 65.

Response to Arguments

Applicant's arguments with respect to claims 37-70 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOAN M. LE whose telephone number is (571)272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TL/
Toan Le
February 13, 2008

/John E Barlow Jr./
Supervisory Patent Examiner,
Art Unit 2863